

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) An enhancer consisting of the following DNA (a), (b), or (c):

(a) DNA consisting of the nucleotide sequence as shown in any one of SEQ ID NOs: 1 to 4;

(b) DNA consisting of a nucleotide sequence derived from the nucleotide sequence as shown in any one of SEQ ID NOs: 1 to 4 by deletion, substitution, or addition of one or more to thirty nucleotides and capable of enhancing gene expression efficiency in motor neurons; or

(c) DNA consisting of a nucleotide sequence capable of hybridizing under stringent conditions to a nucleotide sequence complementary to the nucleotide sequence as shown in any one of SEQ ID NOs: 1 to 4 and capable of enhancing gene expression efficiency in motor neurons.

2. (Currently Amended) An enhancer consisting of the following DNA (a), (b), or (c):

(a) DNA consisting of any one of a nucleotide sequence consisting of nucleotides 235 to 560 of SEQ ID NO: 1, a nucleotide sequence consisting of nucleotides 204 to 528 of SEQ ID NO: 2, a nucleotide sequence consisting of nucleotides 206 to 530 of SEQ ID NO: 3, or a nucleotide sequence consisting of nucleotides 211 to 555 of SEQ ID NO: 4;

(b) DNA consisting of a nucleotide sequence derived from any one of a nucleotide sequence consisting of nucleotides 235 to 560 of SEQ ID NO: 1, a nucleotide sequence consisting of nucleotides 204 to 528 of SEQ ID NO: 2, a nucleotide sequence consisting of nucleotides 206 to 530 of SEQ ID NO: 3, or a nucleotide sequence consisting of nucleotides 211 to 555 of SEQ ID NO: 4 by deletion, substitution, or addition of one or more to thirty nucleotides and capable of enhancing gene expression efficiency in motor neurons; or

(c) DNA consisting of a nucleotide sequence capable of hybridizing under stringent conditions to a nucleotide sequence complementary to any one of a nucleotide sequence consisting of nucleotides 235 to 560 of SEQ ID NO: 1, a nucleotide sequence consisting of nucleotides 204 to 528 of SEQ ID NO: 2, a nucleotide sequence consisting of nucleotides 206 to 530 of SEQ ID NO: 3, or a nucleotide sequence consisting of nucleotides 211 to 555 of SEQ ID NO: 4 and capable of enhancing gene expression efficiency in motor neurons.

3. (Previously Presented) The enhancer according to claim 1, wherein the motor neurons dorsally extend axons.

4. (Currently Amended) An enhancer consisting of the following DNA (a), (b), or (c):

(a) DNA consisting of the nucleotide sequence as shown in SEQ ID NO: 5;

(b) DNA consisting of a nucleotide sequence derived from the nucleotide sequence as shown in SEQ ID NO: 5 by deletion, substitution, or addition of one or more to thirty nucleotides and capable of enhancing gene expression efficiency in sensory neurons; or

(c) DNA consisting of a nucleotide sequence capable of hybridizing under stringent conditions to a nucleotide sequence complementary to the nucleotide sequence as shown in SEQ ID NO: 5 and capable of enhancing gene expression efficiency in sensory neurons.

5. (Currently Amended) An enhancer consisting of the following DNA (a), (b), or (c):

(a) DNA consisting of the nucleotide sequence as shown in SEQ ID NO: 5 or 6;

(b) DNA consisting of a nucleotide sequence derived from the nucleotide sequence as shown in SEQ ID NO: 5 or 6 by deletion, substitution, or addition of one or ~~more~~ to thirty nucleotides and capable of enhancing gene expression efficiency in motor neurons that ventrally extend axons; or

(c) DNA consisting of a nucleotide sequence capable of hybridizing under stringent conditions to a nucleotide sequence complementary to the nucleotide sequence as shown in SEQ ID NO: 5 and capable of enhancing gene expression efficiency in motor neurons that ventrally extend axons.

6. (Previously Presented) A vector comprising the enhancer according to claim 1.

7. (Original) The vector according to claim 6 further comprising a promoter and a gene comprising a coding region.

8. (Previously Presented) A transgenic cell line comprising the vector according to claim 6.

9. (Previously Presented) A transgenic animal comprising the vector according to claim 6.

10. (Previously Presented) A method for regulating gene expression, wherein expression efficiency of a given gene is improved under the control of the enhancer according to claim 1.

11. (Previously Presented) A method for regulating gene expression comprising a step of introducing a nucleic acid construct comprising the enhancer according to claim 1 and the given gene into cells, wherein expression efficiency of the given gene is improved in motor neurons and/or in sensory neurons.

12. (Previously Presented) A method for evaluating differentiation of pluripotent stem cells comprising a step of introducing a nucleic acid construct comprising the enhancer according to claim 1, a promoter, and a reporter gene into pluripotent stem cells and a step of inducing the pluripotent stem cells to differentiate, wherein reporter gene expression is assayed to evaluate whether or not the pluripotent stem cells are differentiated into motor neurons or sensory neurons.

13. (Previously Presented) A method for regenerating motor neurons/sensory neurons comprising steps of:

introducing a nucleic acid construct comprising the enhancer according to claim 1, a promoter, and a reporter gene into pluripotent stem cells;

inducing the pluripotent stem cells to differentiate;

assaying reporter gene expression to evaluate whether or not the pluripotent stem cells are differentiated into motor neurons or sensory neurons to thereby select motor neurons or sensory neurons; and

transplanting the selected motor neurons or sensory neurons.